

**MICHIGAN DEPARTMENT OF HEALTH &
HUMAN SERVICES**

Michigan Regional Trauma Report



Region 6

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TABLE OF CONTENTS

TABLE OF CONTENTS	3
EXECUTIVE SUMMARY	4
DEVELOPING THE REGIONAL TRAUMA NETWORK	5
SYSTEM GOVERNANCE	5
OVERALL PROGRESS	6
POLICY DEVELOPMENT	6
2014 ACCOMPLISHMENTS	6
2015 MAJOR FOCUS	7
EPIDEMIOLOGY	7
THE REGIONAL WORK PLAN	9
SYSTEM GOVERNANCE	10
INJURY PREVENTION	11
CITIZEN ACCESS TO THE SYSTEM	11
TRAUMA SYSTEM COMMUNICATIONS	11
MEDICAL OVERSIGHT	12
PRE-HOSPITAL TRIAGE CRITERIA	13
TRAUMA DIVERSION POLICIES	13
TRAUMA BYPASS PROTOCOLS	13
REGIONAL TRAUMA TREATMENT GUIDELINES	14
REGIONAL QUALITY IMPROVEMENT PLANS	14
TRAUMA EDUCATION	15
BEST PRACTICES / SUCCESSES	15
SUMMARY	16

EXECUTIVE SUMMARY



Region 6 spans a large area across the middle of the state, extending from the western border to the center of the state. The US 2011 Census statistics list the total population of Region 6 counties at 1, 456,776, which ranks it the third most populous region within the state. During the summer months the population increases as the many miles of shoreline attract tourists from around the world.

There are 13 counties in the region: Clare, Ionia, Isabella, Kent, Lake, Mason, Mecosta, Montcalm, Muskegon, Newaygo, Oceana, Osceola, and Ottawa. A majority of the counties consist of small rural communities with the exception of Kent, Ottawa, and Muskegon. Lake County is the only one that does not have an acute care hospital located within its border.

Region 6 is served by 22 hospitals, 138 EMS Agencies, 12 Medical Control Authorities (MCAs), and 7 local health departments. There is one federally recognized tribe in Region 6. Three of 22 hospitals in the region have been verified by the American College of Surgeons (ACS) and designated by the State of Michigan as trauma facilities. This verification and designation process confirms that the hospital is performing as a trauma facility and meets the required criteria, and validates the resources needed to provide trauma care. The three verified and designated facilities are located in Kent County and include: Spectrum Health Butterworth with Level I Trauma designation, Helen DeVos Children's with Level I Pediatric Trauma designation, and Mercy Health Care St. Mary's with Level II Trauma designation. Helen DeVos Children's Hospital is a full service Children's Hospital and has experience working with a regional approach to care (pediatrics) for several years through a successful program called "Partners in Children's Health" and involves numerous regional healthcare partners.

The purpose of this document is to provide evidence that regulatory requirements of the administrative rules have been met, and to be used as a tool to guide progress toward further system development. Each Regional Trauma Network (RTN) is tasked with developing bylaws, submitting a regional trauma network application, and developing a work plan to address 10 components relating to trauma activities. These include: injury prevention, access to the trauma system, communications, medical oversight, pre-hospital triage criteria, trauma diversion policies, trauma bypass protocols, regional trauma treatment guidelines, regional quality improvement plans, and trauma education.

The goal of each region's RTN and Regional Trauma Advisory Council (RTAC) is to implement an "all-inclusive" trauma system in their region. This system will provide for the care of all injured patients in a

regional and statewide integrated system of health care for both the pre-hospital and healthcare facility environments, and will include personnel that are well trained and equipped to care for injured patients of any severity. Each healthcare facility can participate in the trauma system to the extent or level that it is willing to commit the resources necessary for the appropriate management of the trauma patients. This ensures that all trauma patients are served by a system of coordinated care, based on the degree of injury and extent of care required.

Region 6 RTN membership is comprised of designees from each of the twelve MCAs as identified in Figure 1, with active bylaws formulated with input from the RTAC members.

Region 6 2014 RTN Representatives by MCA
Figure 1

Representative	Medical Control Authority
Michelle Brady RN	Clare County MCA
Tara Lantz RN	Ionia County MCA
Roger Skrabut RN	Isabella County MCA
Todd Chasse MD	Kent County MCA
Harold Moores MD	Lakola MCA (Lake and Osceola Counties)
William Kokx DO	Mason County MCA
Kathy Greenman RN	Mecosta County MCA
Eric Smith	Montcalm County MCA
Jerry Evans MD	Muskegon County MCA
Dan Ceglowski MD	Newaygo County MCA
Loren Reed MD	Oceana County MCA
Rich Szczepanek	Ottawa County MCA

DEVELOPING THE REGIONAL TRAUMA NETWORK

All MCAs in a region are required to participate in the RTN, to appoint an advisory committee, and to develop a regional trauma plan. The trauma plan will encompass the comprehensive and integrated arrangement of emergency medical services, hospitals, equipment, personnel, communications, medical control authorities, and stakeholder organizations needed to provide trauma care to all patients within the region.

SYSTEM GOVERNANCE

Region 6's RTN is comprised of representatives from the 12 MCAs, and includes EMS medical directors, trauma program managers, emergency department directors, and MCA administrators. The RTN membership has been focused on being recognized by the State of Michigan as a RTN, and assessing the regional resources while building strong relationships. Eleven of the twelve RTN members have been active in creating and completing the work plan objectives through participation on the RTAC and committees.

The RTAC is comprised of representatives outlined in the bylaws including hospitals, EMS agencies, MCA's, and a consumer. The RTAC chair is the Trauma Medical Director at the only Level II verified

and designated trauma facility in the region, and also is a member of the State Trauma Advisory Council (STAC) as well as the Chair of the Michigan Chapter of the American College of Surgeon's Committee on Trauma (ACS-COT). The Vice Chair is the MCA Medical Director for the West Michigan Medical Control Consortium (WMMCC) and also Region 6's Health Care Coalition (HCC), as well as a past member of STAC. Active membership in the RTAC has risen 43% from 24 members to 42. The RTAC, whose leadership is well versed in trauma and has taken responsibility to chair committees and actively participate at the state level in a variety of positions, includes trauma medical directors, and trauma program managers. The trauma program managers of the verified and designated trauma facilities serve on the STAC, Data Committee, and Designation Committee for the State of Michigan.

Committee chairs are responsible for meeting the objectives of the work plan and reporting to the RTAC and RTN through reports at the scheduled meetings and submitting committee meeting minutes.

Region 6 is fortunate to have such committed, talented trauma activists within its borders. Ninety five percent of the regional acute care hospitals have committed active participation for the RTN, RTAC, and committee work. Most EMS agencies have also committed active participation in meeting the objectives of the RTN. Region 6 benefits from having a dedicated consumer who is involved and committed to improving trauma care in the region and state.

OVERALL PROGRESS

Region 6 submitted an application to be recognized as a RTN that had a score of 30 out of a possible 100 points within the indicator evaluation. Many objectives were scored at the minimal level knowing that the region has not assessed the indicator or had minimal development. Significant progress has been accomplished in this first year of trauma system development through communication, understanding, team building, and committee development. The most important accomplishment of Region 6 was the commitment to become all inclusive with MCAs, hospitals, and EMS agencies working together. Having the right partners involved remains crucial to meeting the objectives outlined in the work plan.

Region 6 has increased the number of facilities submitting data into the state trauma registry from three to six. Although Region 6 has sixteen more facilities that need to participate, the plan is in place for accomplishing this objective. The facilities who are part of a larger system are taking the initiative to assist the smaller regional partners in this new process of data collection, data submission, and data review.

POLICY DEVELOPMENT

Region 6 RTN bylaws have been operationalized and guide the RTN, RTAC, and Regional Professional Standard Review Organization (RPSRO), as well as each committee, in accomplishing the objectives of the regional trauma work plan. The RTN and RTAC have written representative approval as mandated by the bylaws. Each MCA in Region 6 was involved in the selection of the representative, and that representative is responsible for reporting RTN activities at the MCA meeting, and sharing the RTN and RTAC minutes. The RTN requested that each of the twelve MCAs have RTN updates as a standing agenda item.

2014 ACCOMPLISHMENTS

Three facilities in Region 6 were in the inaugural round of trauma facility designation, including the first Level 1 Pediatric Hospital to receive trauma designation by the State of Michigan. Considering that the region is primarily rural, this is a major accomplishment.

Another significant accomplishment is the all-inclusive representation of MCAs, facilities, and EMS agencies as the RTN works toward meeting the objectives of the work plan.

2015 MAJOR FOCUS

The focus of the RTN for 2015 will be to support the committees as they work toward meeting the objectives of the work plan. Because many of the indicator objectives rely on data as a resource, the RTN will be encouraging facilities to meet the data collection, submission, and review criteria outlined in the rules. Another major focus will be continuing the development, and then implementation of, regional triage and destination protocols as well as transfer guidelines. These are lofty goals but reachable in the timeframes set forth by the RTN. Additionally, the RTN will focus on assisting those facilities who are in the process of verifying and designating as a trauma facility in the State of Michigan.

EPIDEMIOLOGY

The leading cause of death and hospitalization from injury continues to be falls and motor vehicle crashes. The Region 6 Data Committee is in the process of assessing the leading causes of injury in the region by testing systems on data retrieval and has the goal of sharing this information with the Injury Prevention Committee as they move forward in meeting objectives. The Injury Prevention Committee is in the process of assessing the region's current injury prevention programs and locations so they can evaluate needs within the region.

Leading Causes of Injury Death and Non-fatal Injury Hospitalization
Figure 2

Region 6			
Deaths		Hospitalizations	
Cause	Number	Cause	Number
Unintentional Fall	175	Unintentional Fall	2,591
Motor Vehicle Crash	134	Motor Vehicle Crash	724
Suicide	133	Assault	193

Source: Thomas W. Largo, MPH, Division of Environmental Health, Bureau of Disease Control, Prevention, and Epidemiology, Michigan Department of Health & Human Services, 2012 data.

Figure 3

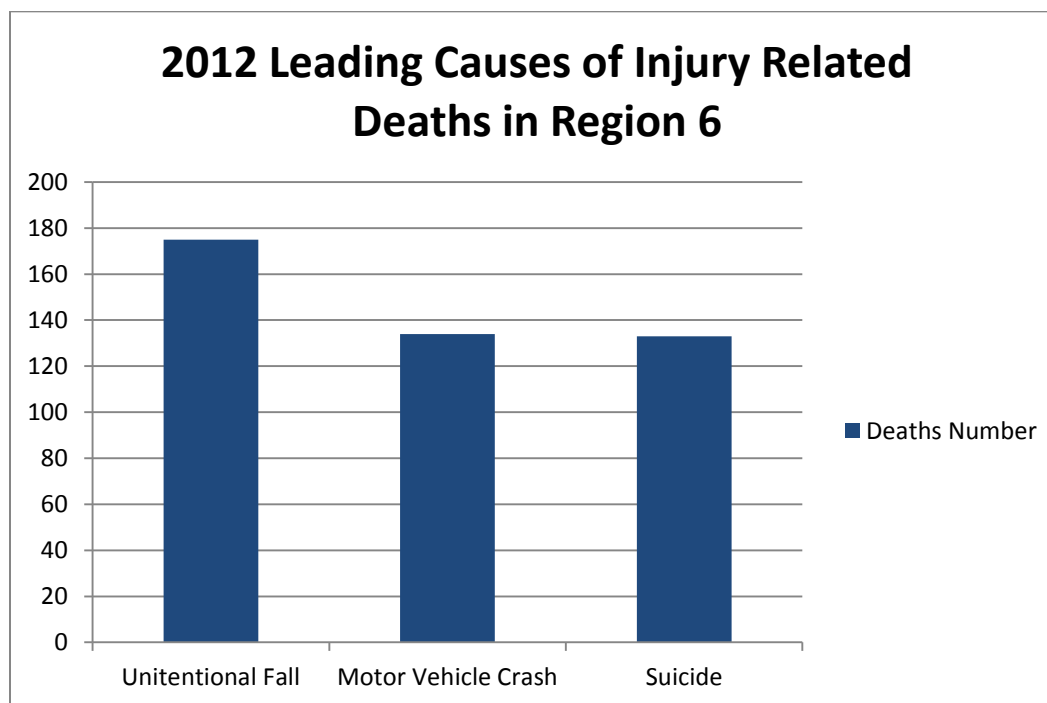
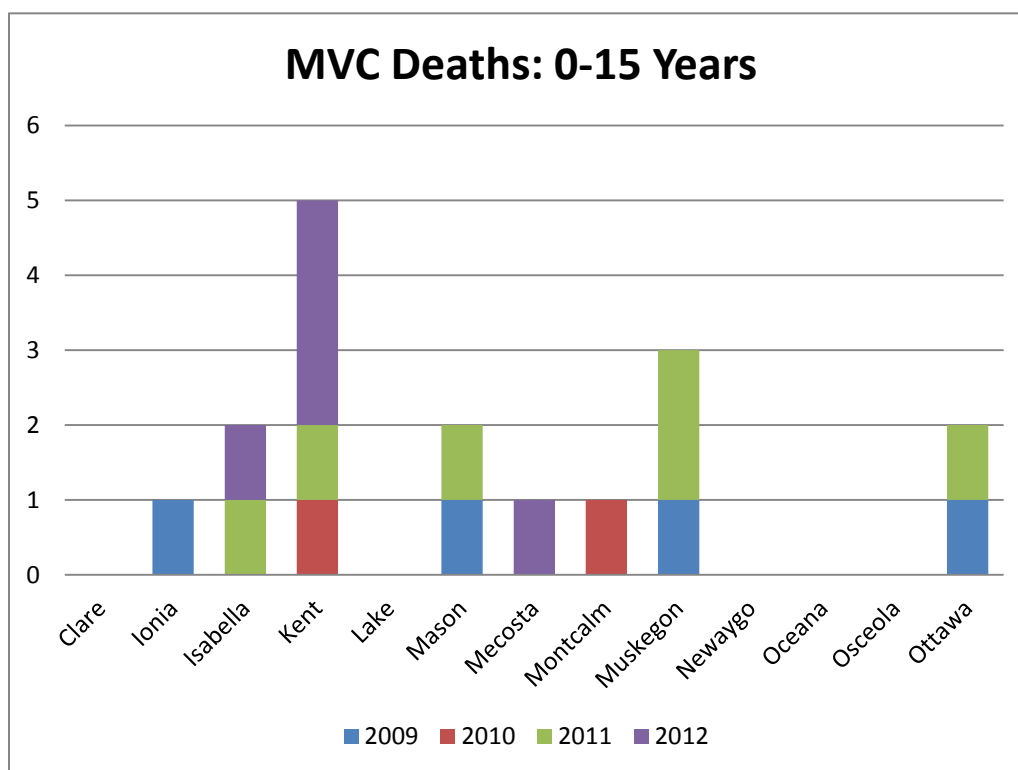


Figure 3 Source: Thomas W. Largo, MPH, Division of Environmental Health, Bureau of Disease Control, Prevention, and Epidemiology, Michigan Department of Health & Human Services, 2012 data.

The Centers for Disease Control and Prevention has identified motor vehicle crash (MVC) injuries as one of the leading causes of injury in the United States, and that they are costly but preventable (<http://www.cdc.gov/vitalsigns/crash-injuries/index.html>). In 2014 Michigan had an updated child passenger safety bill introduced that would bring the law to a level that matches evidence supported by research in protecting children under the age of 16. Evidence shows that state laws result in more children being buckled up.

The Region 6 Injury Prevention Committee is in the process of collecting information regarding the number of injury prevention activities currently available in Region 6, with the goal of correlating activities with leading causes of injury and death. The goal is to provide injury prevention activities in those counties in need, as supported by the injury and death data. The first step can be seen in Figure 4 where each counties number of deaths related to MVC are identified for the non-driving age group. Although this only covers a small age group, it has been identified as a place to start and a goal that can be reached.

Figure 4



Source: Fatality Analysis Reporting Data Query System <http://www.fars.nhtsa.dot//QuerySection/SelectYear.aspx>

THE REGIONAL WORK PLAN

Michigan Administrative Rule 325.132 requires that each regional network submit a comprehensive system development plan (work plan) as a component of formal recognition as an RTN. This work plan is a tool for guiding and measuring progress toward the ongoing development of the regional trauma system. The work plan is based on eleven required components for the regional trauma system:

- 1) System Governance
- 2) Injury prevention
- 3) Access to the system
- 4) Communications
- 5) Medical oversight
- 6) Pre-hospital triage criteria
- 7) Trauma diversion policies
- 8) Trauma bypass protocols
- 9) Regional trauma treatment guidelines
- 10) Regional quality improvement plans
- 11) Trauma education

SYSTEM GOVERNANCE

Each region shall establish a RTN. All MCAs within a region must participate in the RTN, and life support agencies shall be offered membership on the regional trauma advisory council. Regional trauma advisory committees shall maximize the inclusion of their constituents. The RTN establishes a process to assess, develop, and evaluate the trauma system in cooperation with the regional stakeholders in trauma care.

ACHIEVEMENTS

- The RTN bylaws were approved and implemented
- The RTN and RTAC members have signed letters of representation from their agency
- The RTN and RTAC members attend 60% of regularly scheduled meetings
- RTN activity is reported and recorded in the minutes of scheduled MCA meetings in Region 6

Below is a picture of RTN members from facilities awarded designation as trauma facilities within Region 6 at the Inaugural State Trauma Designation kickoff event held December 15, 2014. Pictured are: Nick Lyons (MDHHS Director); Sherri Veurink- Balicki (Trauma Clinical Nurse Specialist, Mercy Health St. Mary's); Wayne Vanderkolk (Trauma Medical Director, Mercy Health St. Mary's); Diana Ropele (Region 6 Regional Trauma Coordinator); Amy Koestner (Trauma Program Manager, Butterworth); James DeCou (Trauma Medical Director, Helen DeVos Children's Hospital); Gaby Iskander (Trauma Medical Director, Spectrum Health Butterworth); Todd Nickoles (Trauma Program Manager, Helen DeVos Children's Hospital, Spectrum Health); Jenny Wincek (Director Helen DeVos Children's Hospital, Spectrum Health); Emergency Department Manager, Stephanie Craft (Helen DeVos Children's Hospital, Spectrum Health).



2015 FOCUS

The focus for 2015 will be on consensus building among system participants as the trauma system matures.

INJURY PREVENTION

The RTN, in cooperation with other agencies and organizations, uses analytical tools to monitor the performance of population-based (regional) injury prevention programs.

ACHIEVEMENTS

- The Injury Prevention Committee was appointed and has representation from all agencies across the region
- The committee is in the process of identifying facilities and organizations that provide community-based injury prevention activities

2015 FOCUS

The focus for 2015 will be to continue to identify facilities and organizations that provide community-based injury prevention activities.

CITIZEN ACCESS TO THE SYSTEM

The trauma system is supported by EMS medical oversight of dispatch procedures and coordinated response resources. The trauma system EMS medical directors are actively involved with the development, implementation, and ongoing evaluation of EMS system dispatch protocols to ensure they are congruent with the trauma system design. These protocols include, but are not limited to, which resources to dispatch (Advanced Life Support vs. Basic Life Support), air-ground coordination and early notification of the trauma facility, pre-arrival instructions, and other procedures necessary to ensure dispatched resources are consistent with the needs of injured patients. There are sufficient, well-coordinated air and ground ambulance resources to ensure EMS providers arrive at the trauma scene to promptly and expeditiously transport the patient to the correct hospital by the correct transportation mode.

ACHIEVEMENTS

- The Communication/Operations Committee was appointed and has representation from MCAs, facilities, Medical Directors, Aeromedical Transport, Dispatch EMS, and EMS agencies
- They are in the process of collecting dispatch protocols and processes

2015 FOCUS

The focus for 2015 will be to continue collect dispatch protocols and identify processes related to dispatch, with the goal of understanding the region's plan for coordination of trauma communication systems for triage, treatment, and transport for single or multiple causality incidents.

TRAUMA SYSTEM COMMUNICATIONS

The regional trauma system is supported by a coordinated communication system linking and integrating hospitals, life support agencies, the EMS system, and the Regional Trauma Network. There are established procedures for EMS and trauma system communication for major EMS events and multiple jurisdiction incidents that are effectively coordinated with the overall regional response plans. There is a procedure for communication among medical facilities when arranging for inter-facility transfers, including contingencies for radio or telephone system failure.

ACHIEVEMENTS

- The Communication/Operations Committee and the Work Group were appointed and have representation from MCA's, facilities, Medical Directors, Aeromedical Transport, Dispatch EMS, and EMS agencies
- They are in the process of collecting dispatch protocols and processes
- The RTAC collaborates with the West Michigan Regional Medical Control Consortium to incorporate existing local written EMS communications procedures such as EM Resource
- The RTN has approved the regional definition of "major trauma events"
- Region 6 RTN members participated in the Michigan Transportable Emergency Surge Assistance exercise in Region 6
- A definition of an inter-facility transfer meeting regulatory standards has been developed and is waiting for RTN approval
- An inter-facility transfer checklist has been created, but the deadline for its implementation was not met. It will be trialed in early 2015 and its implementation is planned for the first half of 2015. The inter-facility transfer procedure is currently under development

2015 FOCUS

The 2015 focus will be to continue collaboration with the WMRMCC, Region 6 Health Care Coalition, and facilities to further incorporate existing local written EMS communications procedures such as EM Resource.

Regional implementation of an inter-facility transfer checklist will be trialed in early 2015 and its implementation is planned for the first half of 2015.

Further development of the inter-facility transfer procedure will also be a focus for this indicator and objectives.

MEDICAL OVERSIGHT

The regional trauma system is supported by active EMS medical oversight of trauma communications, pre-hospital triage, treatment, and transport protocols. There is well defined regional trauma system medical oversight integrating the specialty needs of the trauma system and the medical oversight of the overall EMS system. There is a clearly defined, cooperative, and ongoing relationship between regional trauma physician leaders and the EMS system medical directors in the region.

ACHIEVEMENTS

- The RPSRO has been appointed and has met according to bylaws and administrative rules
- The RPSRO has recommended a regional definition for morbidity to the RTN
- Regularly scheduled and attended RTN and RTAC meetings provide a venue for the two groups to interact
- The RPSRO is also developing methods to address concerns and facilitate communications on an ongoing basis

2015 FOCUS

In 2015 there is a plan to further develop processes for communication related to oversight of trauma communications and protocols. Additionally, there is a proposed first annual meeting between Trauma Medical Directors and MCA Medical Directors sponsored by the Level 1 trauma facility.

PRE-HOSPITAL TRIAGE CRITERIA

The regional trauma system is supported by system-wide pre-hospital triage criteria. The region has adopted regional pre-hospital triage protocols to ensure trauma patients are transported to an appropriate trauma center based on their injuries. The triage protocols are regularly evaluated and updated to ensure acceptable and region-defined rates of sensitivity and specificity for appropriate identification of a major trauma patient.

ACHIEVEMENTS

- The Protocol Committee was appointed and has representation per the bylaws
- The Protocol Committee provided regional feedback to the state regarding the proposed triage and destination protocol

2015 FOCUS

The 2015 focus for this objective is a region wide approval of a triage and destination protocol modeled after the state protocol.

TRAUMA DIVERSION POLICIES

Diversion policies ensure that acute care facilities are integrated into an efficient system to provide optimal care for all injured patients. The RTN plan should ensure that the number, levels, and distribution of trauma facilities are communicated to all partners and stakeholders. The RTN should develop procedures to insure that trauma patients are transported to an appropriate facility that is prepared to provide care. The state trauma registry is used to identify and evaluate regional trauma care and improve the allocation of resources.

ACHIEVEMENTS

- Development and distribution of a region wide self-reporting survey assessing facility resources related to trauma patient management and specialty services
- Introduced all facilities to the administrative rule requirements of data submission into the state trauma registry

2015 FOCUS

The focus in 2015 will be to review the results of the survey and determine the distribution of facilities that will be seeking verification as well as the level of verification.

Another focus will be to review the state protocol for trauma diversion and develop a regional protocol to be approved by the RTN. Additionally, focus on assisting all facilities in the submission of data into the state registry.

TRAUMA BYPASS PROTOCOLS

The roles, resources and responsibilities of trauma care facilities are integrated into a resource efficient, inclusive network that meets standards and provides optimal care for injured patients. The regional trauma plan has clearly defined the roles, resources, and responsibilities of all acute care facilities treating trauma, and of facilities that provide care to specialty populations (spinal cord injury, burns, pediatrics,

other). There is a regional trauma bypass protocol that provides EMS guidance for bypassing a trauma care facility for another more appropriate trauma care facility.

ACHIEVEMENTS

The Protocol Committee and Work Group are actively assessing which facilities provide care to specialty populations in the region.

2015 FOCUS

The 2015 focus will be to develop and implement a bypass protocol in Region 6 based on the administrative rules and information provided by the facilities in the region, as well as all 12 MCAs.

REGIONAL TRAUMA TREATMENT GUIDELINES

The RTN ensures optimal patient care through the development of regional trauma treatment guidelines. When injured patients arrive at a medical facility that cannot provide the appropriate level of definitive care, there is an organized and regularly monitored system to ensure that the patients are *expeditiously transferred* to the appropriate, system-defined trauma facility. Collected data from a variety of sources are used to review the appropriateness of all-inclusive regional trauma performance standards, from injury prevention through rehabilitation.

ACHIEVEMENTS

The RPSRO for Region 6 has been appointed and is in the process of identifying which performance standards will be developed, and the processes to obtain the data needed to determine if the region is meeting the performance standards.

2015 FOCUS

The 2015 focus for this indicator will be to have written, quantifiable regional performance standards based on the administrative rules and approved by the RTN. This goal is attainable in 2015 for the RTN.

REGIONAL QUALITY IMPROVEMENT PLANS

The RTN/RTAC uses system data to evaluate system performance and regularly reviews system performance reports to develop regional policy. No less than once per year, the RTN generates data reports that are disseminated to all trauma system stakeholders to evaluate and improve system performance.

ACHIEVEMENTS

- The Data Committee has been appointed and has representation from key partners outlined in the RTN bylaws
- Region 6 and Mercy Health Hackley sponsored additional ImageTrend (data registry software) training for facilities

2015 FOCUS

The Data Committee will continue to focus on defining and validating existing data elements used by Region 6 stakeholders and report to the RTN by October, 2015.

TRAUMA EDUCATION

The regional trauma network ensures a competent workforce through trauma education standards. The regional trauma network establishes and ensures that appropriate levels of EMS, nursing and physician trauma training courses are provided on a regular basis.

ACHIEVEMENTS

- The Region 6 RTN Education Committee has been appointed and has representation as outlined in the bylaws and administrative rules
- The committee has created a survey with the intent of identifying existing regional trauma education guidelines for EMS personnel, nurses, and physicians. This survey was shared with the state to collaborate with the state survey
- The committee has identified a possible electronic communication process that would be feasible for all trauma stakeholders to access educational opportunities

2015 FOCUS

The 2015 focus for the Education Committee will be to identify trauma personnel who should be notified of new or revised protocols and information. Additionally the education committee will continue to focus on collaborating with the State in identifying existing trauma education guidelines for EMS personnel, nurses, and physicians.

BEST PRACTICES / SUCCESSES

The most important achievement in 2014 for Region 6 was being recognized by the State of Michigan as a Regional Trauma Network. The Region is committed to working toward a mature regional trauma system as evidenced by the increased number of active participants from all stakeholders. It is an all-inclusive system that is guided by the administrative rules and RTN bylaws. Committee membership has strong representation, participation from all agencies, and leadership with extensive trauma knowledge, in spite of the long distances that the region covers.

Region 6 continues to be a leader in the statewide trauma system development, as evidenced by the number of committed individuals from the RTAC who are actively participating at the state level. Those include the following physicians and nurses from the designated Level I's and Level II:

- Dr. Wayne Vanderkolk: STAC Committee member, Chair of the Designation Committee
- Amy Koestner: STAC Committee member
- Gaby Iskander: Data Committee member
- Sherri Veurink-Balicki: Data Committee member
- Todd Chassee: Designation Committee member
- Todd Nickoles: Designation Committee member, Treasurer Michigan Trauma Coalition

Additionally, there are numerous members of the RTN and RTAC who are active at the state level in the EMS Coordination Committee (EMSCC) and Health Care Preparedness.

As stated earlier in this report, Region 6 also boasts the inaugural Trauma Facility Designation for the three ACS verified trauma facilities.

SUMMARY

Region 6 trauma partners and stakeholders have proven to be committed and knowledgeable leaders, and embraced the work of operationalizing and developing the trauma system. The 2014 accomplishments and successes will provide a solid foundation on which to substantially expand and enhance the Region 6 trauma system.